

# Lichens and bears on the Katmai Coast

by Ed Berg

There is a reason why the marine weather forecast for the Shelikof Strait is always the worst. The winds coming up the Aleutian Chain are channeled between Kodiak Island and the Katmai coast of the Alaska Peninsula. Seas of 10-20 feet are not uncommon; the State Ferry is known as the “Dramamine Express” for its passage down this wind tunnel. A persistent North Pacific low pressure center hung out for weeks during July, bringing clouds, wind and rain to the Katmai coast, frequently shutting down bear-viewing flights from the Kenai and leaving unhappy campers stranded on the beach.

I was one such stranded Katmai camper, albeit not an unhappy one, as I was kept warm and dry and well-fed for six days at the Hallo Bay Wilderness Camp, 120 air miles southwest of Homer. The camp is situated at the north end of Hallo Bay, in the heart of some of the best brown bear habitat in the world.

My task on the Katmai coast, however, was not bear viewing, but was collecting lichens growing on the trees and rocks along the coast. I was on loan for two weeks to the National Park Service from my usual post at the Kenai National Wildlife Refuge, with the assigned task of initiating a lichen survey of Katmai National Park.

Lichens are those curious little “plants” that are a mixture of both fungi and algae. The fungi provide the basic physical structure of the lichen, and the algae provide food for the fungi through photosynthesis.

Sometimes this mutualism is described as “symbiosis” because each organism (fungi and algae) provides something needed by the other, but the relationship is more like captive “farming” of the algae by the fungi. Filament-type algae for example that normally grow as long chains are occur only as single cells within a layer of the fungal body of the lichen, just like carefully planted vegetables in a garden.

The coastal scrub birch trees on the Katmai coast are heavily encrusted with leafy lichens like *Hypogymnia* and *Lobaria*, and the crowberry heath meadows are sprinkled with clumps of “reindeer moss,” which is the lichen *Cladonia*, an important winter food for caribou. I felt like a kid in a candy store as I packed my collecting bags with the great variety of lichens

growing on this lush coast.

Hallo Bay Wilderness Camp is located on the site of a long abandoned Native village of Kaguyak. Old 1950s photos show a Russian Orthodox church in a grassy meadow, whereas scrub birch and alder forest now dominate the coastal apron on which the camp is located. Like much of the west side of Cook Inlet this land was probably uplifted during the 1964 Earthquake or by post-1964 rebound. The birch and alder trees at Hallo Bay, for example, are mostly four to five inches in diameter and there are few old stumps or fallen logs on the ground, indicating a new “first time” forest. The uplift here was perhaps a few feet, and nowhere nearly as dramatic as it was in parts of Prince William Sound, such as Montague Island which went up 33 feet, according to barnacle and mussel zones stranded many feet above the highest tides.

Most people visit Hallo Bay to look at brown bears, however, and not to pick lichens and ponder tectonic upheaval. The bears here are pristine, as they have never learned about humans as a food source. The Camp operators are scrupulous about never leaving any food or smelly objects around. All garbage is flown out. Camp guests agree to not keep food in their canvas weatherport cabins, and to only leave camp with a guide. Bears occasionally pass through camp, but have never become a problem because there is nothing in camp to eat.

It was a thrill to hike with the camp guides Kevin Copley and Frank Massaro along the beach watching bears feeding in sedge meadows and looking for early salmon in the creek. In one meadow we saw two sows, each with two cubs. We stood quietly in a light rain for a half an hour watching two subadults, probably three to four year old siblings, playfully pushing each other and rolling about on the beach.

The camp guides do not carry guns or bear spray, but do carry 10-inch marine signal flares, made by Ikaros. These handheld flares produce 60 seconds of bright flames and dense white smoke, both of which are strongly repellent to bears. With these flares there is no danger of wounding the bear, or disabling oneself or others by bad shooting or pepper spray blown back into one’s face. In sixteen years of operation the

guides have only used the flares on four occasions, not in hostile encounters but to discourage over-curious subadults from approaching too closely.

After six days the cloud ceiling lifted slightly and the Park Service sent a float plane from King Salmon to bring me over to the west side of the mountains. The beach at Hallo Bay is great for wheeled landings but not so good for float landings in the surf. I was pretty wet by the time I scrambled on board the pitching 206 with my gear, but that was nothing compared to the white-knuckle flight through the cloud-filled mountains. After some moments of tense searching, the pilot found a hole in the dense clouds that led through a mountain pass to the west side where the ceiling was much higher. It would have been bad news if that hole

had closed in while we were flying through the mountains.

The operators of the Hallo Bay camp, Simyra Taback and Clint Hlebechuk, provided substantial logistical for my work and I thank them very kindly. My next article will continue my trip over to the west side of Katmai National Park.

*Ed Berg has been the ecologist at the Kenai National Wildlife Refuge since 1993. Ed will be teaching his 1-credit "Geology of Kachemak Bay" course at the Soldotna and Kachemak Bay campuses of the Kenai Peninsula College, starting September 12 and 14, respectively. Registration is now open. Previous Refuge Notebook columns can be viewed on the Web at <http://www.fws.gov/refuge/kenai/>.*